



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,626	07/21/2003	Shuji Yamakawa	5258-000017	5176
27572	7590	02/09/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			FIGUEROA, FELIX O	
			ART UNIT	PAPER NUMBER
			2833	
DATE MAILED: 02/09/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/623,626	Applicant(s) YAMAKAWA ET AL.	
	Examiner Felix O. Figueroa	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 6, 2004 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (US 6,402,530) in view of Galletly (US 4,739,441) and Hatagishi et al. (US 5,954,533).

Saito discloses a connection structure between bus bars (16) and relay terminals (30a) in an electrical connection box (10) to be mounted on an automobile, the connection structure comprising: each bus bar formed into a desired circuit configuration; an end (16d) of each of the bus bar being bent so that each end is connected to a respective one of the relay terminals; each bus bar being welded to each respective relay terminal (col. 5 lines 52-60). Regarding the recitation "produced by

punching", the method of forming a device is not germane to the issue of patentability of the device itself. Since this recitation does not provide any structural difference or advantage over the prior art structure, it has been given patentable little weight.

Saito discloses substantially the claimed invention except for the specific material for the bus bars. Galletly teaches that the use of aluminum-based bus bars (col.5 lines 1-5) is known. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an aluminum-based metal as the preferred material for the bus bars, in order to provide a lighter-weight bus bar, and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design preference. *In re Leshin*, 125 USPQ 416.

Saito, as modified, discloses substantially the claimed invention except for the insulation resin around the connection parts. Hatagishi teaches the use of an insulating resin (30) surrounding joint connection parts (at 22) to strengthen and protect the connection (col.6 lines 27-29). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the welded connection parts of Saito embedded in a molded resin insulation, as taught by Hatagishi, to strengthen and protect the connection.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (US 6,402,530) in view of Galletly and Hertelendy (US 5,205,757).

Saito discloses a connection structure between bus bars (16) and relay terminals (30a) in an electrical connection box (10) to be mounted on an automobile, the

connection structure comprising: each bus bars formed into a desired circuit configuration; an end (16d) of each of the bus bar being bent so that each end is connected to a respective one of the relay terminals; each bus bar being welded to each respective relay terminal. Regarding the recitation "produced by punching", the method of forming a device is not germane to the issue of patentability of the device itself. Since this recitation does not provide any structural difference or advantage over the prior art structure, it has been given patentable little weight.

Saito discloses substantially the claimed invention except for the specific material for the bus bars. Galletly teaches that the use of aluminum-based bus bars (col.5 lines 1-5) is known. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an aluminum-based metal as the preferred material for the bus bars, in order to provide a lighter-weight bus bar, and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design preference. *In re Leshin*, 125 USPQ 416.

Saito, as modified, discloses substantially the claimed invention except for the grease surrounding the connection parts. Hertelendy teaches the use of grease surrounding joint connection parts (A and 20A) to protect the connection against dust and moisture (col.1 lines 57-61, col.3 lines 33-38). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the welded connection parts of Saito surrounded by grease, as taught by Hertelendy, to protect the connection against dust and moisture.

Response to Arguments

In response to Applicant's arguments that "[n]one of the art cited ... suggest an aluminum base metal bus bar", please note that this argument is moot in view of the new grounds of rejection, i.e. in view of Galletly.

In response to Applicant's arguments that "none of the references illustrate the welded connection embedded in insulation resin or grease surrounding the welded connection", please note that Saito discloses the welded connection to join connection parts. Further, Hatagishi teaches the use of an insulating resin (30) surrounding joint connection parts to strengthen and protect the connection.

In response to Applicant's arguments that Saito "illustrates the connection between a bus bar 16 and bus bars 20 or 30a of a fuse and relay module, respectively, and not to a relay terminal", please note that the relay connection bus bars 30 of Saito are terminals of the relay 15.

In response to applicant's argument that Hatagishi "fails to disclose or suggest the utilization of resin material at the connection between a bus bar and a terminal" because the resin material is between the wire and its terminal, it is first noted that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In this case, Saito teaches the welded connection between the bus bar and the relay terminal.

Additionally, Hatagishi teaches the use of molded insulation resin to improve the connection holding power (col.6 lines 27-29). Please note that it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Hatagishi's teaching of strengthening a connection appears to be reasonably pertinent to a particular problem with which the applicant was concerned (see ¶0013 of the present application: *Also, since the connection parts between the bus bars and the relay terminals are embedded in the molded insulation resin, it is possible to firmly secure the bus bars and relay terminals to each other*).

Applicant's arguments with respect to LaCroix (regarding claim 2) have been considered but are moot in view of the new grounds of rejection.

In response to Applicant's arguments that Saito "fails to disclose or suggest an aluminum base metal bus bar", please note that this argument is moot in view of the new grounds of rejection, i.e. in view of Galletly.

In response to Applicant's arguments that Saito "fails to disclose the welding of bus bars with relay terminals", please note that the relay connection bus bars 30 of Saito are terminals of the relay 15.

In response to Applicant's arguments that Hatagishi regards to a connection between a wire and a terminal, and not between a terminal and a bus bar, please note that it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Hatagishi's teaching of strengthening a connection appears to be reasonably pertinent to a particular problem with which the applicant was concerned.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix O. Figueroa whose telephone number is (571) 272-2003. The examiner can normally be reached on Mon.-Fri., 10:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 Ext. 33. The fax phone

Art Unit: 2833

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ffr

A handwritten signature in black ink, appearing to read "John O. Johnson", followed by a horizontal line.